Listing of Claims:

1. (Original) A method of analyzing amniotic fluid, the method comprising: providing a device for measuring one or more selected biological markers in amniotic fluid; arranging the device with respect to an amniotic sac to measure amniotic fluid in situ without insertion of any instrument into said amniotic sac; using said device to acquire measurement data; and processing said measurement data to obtain a value for said one or more selected biological markers in said amniotic fluid.

2. (Original) The method as claimed in claim 1, wherein said device is a Raman spectrometer.

3. (Original) The method as claimed in claim 2, wherein said arranging comprises directing said spectrometer to analyze said fluid through an abdominal wall.

4. (Original) The method as claimed in claim 2, wherein said arranging comprises directing said spectrometer to analyze said fluid through a cervix.

5. (Currently amended) The method as claimed in ~~any one of~~ claim~~s 1 to~~ 4, further comprising acquiring ultrasound images of the amniotic sac during said arranging to direct or confirm that said device will measure said fluid without interference of a fetus.

6. (Original) A method of treating at least one of pregnant mother and her offspring, the method comprising:

a) providing a device for measuring one or more selected biological markers in amniotic fluid;

b) arranging the device with respect to an amniotic sac to measure amniotic fluid in situ without insertion of any instrument into said amniotic sac;

c) using said device to acquire measurement data;

d) processing said measurement data to obtain a value for said one or more selected markers in said amniotic fluid; and

e) determining at least one of a dietary intervention and a therapeutic intervention in response to said value.

7. (Original) The method as claimed in claim 6, wherein steps a to e are

repeated during pregnancy, and step e comprises considering a response exhibited in said value to at least one past intervention.

8. (Currently amended) The method as claimed in claim 6 ~~or 7~~, wherein said mother is human, and steps a to e are first performed before 12 weeks of pregnancy.

9. (Original) The method as claimed in claim 8, wherein an amniocentesis is performed after steps a to e are first performed, and step e is repeated using a value of said one or more selected markers obtained from said amniocentesis.

10. (Original) The method as claimed in any one of claims 7 to 9, wherein steps a to e are repeated at least three times during pregnancy.

11. (Currently amended) The method as claimed in ~~any one of~~ claims 6 ~~to 10~~, wherein said at least one marker comprises glucose, and said treatment is to control gestational diabetes.

12. (Original) The method as claimed in claims 11, wherein said at least one marker further comprises at least one of insulin and IGF-BP1.

13. (Currently amended) The method as claimed in ~~any one of~~ claims 6 ~~to 12~~, wherein said device is an optical spectrometer.

14. (Original) The method as claimed in claim 13, wherein said arranging comprises directing said spectrometer to analyze said fluid through an abdominal wall.

15. (Original) The method as claimed in claim 13, wherein said arranging comprises directing said spectrometer to analyze said fluid through a cervix.

16. (Original) A method of predicting a risk of developing a medical condition in at least one of a mother and her offspring, the method comprising:

a) providing a device for analyzing amniotic fluid of said mother;

b) using said device to acquire analytical data from said amniotic fluid, wherein the amniotic fluid is analyzed without processing said fluid to separate or concentrate its components; and

c) processing said analytical data to obtain a prediction value for said risk.

17. (Original) The method as claimed in claim 16, wherein said medical condition is birth weight, and said prediction value is indicative of a risk of said offspring being born with one of high and low birth weight.

18. (Currently amended) The method as claimed in claim 16 ~~or 17~~, wherein said device is a spectrometer.

19. (Original) The method as claimed in claim 18, wherein said spectrometer is an optical spectrometer.

20. (Original) The method as claimed in claim 19, wherein said spectrometer is a Raman near-infrared spectrometer.

21. (Original) The method as claimed in claim 18, wherein said spectrometer is a magnetic resonance spectrometer (MRS).

22. (Currently amended) The method as claimed in ~~any one of~~ claim~~s~~ 18 ~~to~~ ~~21~~, wherein said analytical data is spectral data that is correlated directly with said condition, whereby a value of specific biochemical markers is not used to obtain said prediction value.

23. (Original) The method as claimed in claim 22, further comprising steps of:

d) storing said analytical data;

e) obtaining subsequently data concerning development of said condition; and

f) improving correlation data using said stored analytical data and said development data for subsequent use in step c.

24. (Currently amended) The method as claimed in ~~any one of claims~~ 16 ~~to~~ ~~23~~, wherein said using said device comprises arranging the device with respect to an amniotic sac to measure said amniotic fluid in situ without insertion of any instrument into said amniotic sac.

25. (Original) The method as claimed in claim 24, wherein said device is an optical spectrometer, and said arranging comprises directing said spectrometer to analyze said fluid through an abdominal wall.

26. (Original) The method as claimed in claim 24, wherein said device is an optical spectrometer, and said arranging comprises directing said spectrometer to analyze said fluid through a cervix.

27. (Currently amended) The method as claimed in ~~any one of~~ claim~~s~~ 16 ~~to~~ ~~26~~, wherein said mother is human, and steps a to c are first performed at around 12 weeks of pregnancy.

28. (Original) The method as claimed in claim 27, wherein an amniocentesis is performed after steps a to c are first performed, and said medical condition is predicted using data obtained from said amniocentesis.

29. (Currently amended) The method as claimed in ~~any one of~~ claim~~s~~ 16 ~~to~~ ~~28~~, wherein steps a to c are repeated at least three times during pregnancy.

30. (Original) An apparatus for predicting a risk of developing a medical condition in at least one of a mother and her offspring, the apparatus comprising:

a device for analyzing amniotic fluid; and

a processing unit for processing analytical data from said device to obtain a prediction value for said risk.

31. (Original) The apparatus as claimed in claim 30, wherein said device is a spectrometer, said analytical data comprising a spectrum of said fluid.

32. (Original) The apparatus as claimed in claim 31, wherein said spectrometer is a Raman spectrometer.

33. (Original) The apparatus as claimed in claim 32, wherein said Raman spectrometer operates in the near-infrared range.

34. (Original) The apparatus as claimed in claim31, wherein said spectrometer is a magnetic resonance spectrometer (MRS).

35. (Currently amended) The apparatus as claimed in ~~any one of~~ claim~~s~~ 31 ~~to~~ ~~34~~, wherein said spectrum is correlated directly with said condition, whereby a value of specific biochemical markers is not used to obtain said

prediction value.

36. (Currently amended) The apparatus as claimed in claim 32 ~~or 33~~, further comprising:

an optical coupler adapted to arrange said device with respect to said amniotic sac to measure said amniotic fluid in situ without insertion of any instrument into said amniotic sac.

37. (Original) The apparatus as claimed in claims 36, wherein said spectrum is correlated directly with said condition, whereby a value of specific biochemical markers is not used to obtain said prediction value.

38. (Currently amended) The apparatus as claimed in claim 36 ~~or 37~~, wherein said coupler is adapted to arrange said spectrometer to analyze said fluid through an abdominal wall.

39. (Currently amended) The apparatus as claimed in claim 36 ~~or 37~~, wherein said coupler is adapted to arrange said spectrometer to analyze said fluid through a cervix.

40. (Original) The apparatus as claimed in claim 36, wherein said coupler is adapted to operate in contact with said woman in a position near said amniotic sac.

41. (Currently amended) A system for analyzing amniotic fluid in situ in a pregnant patient having an amniotic sac containing said fluid without insertion of any instrument into said sac, the system comprising:

a device for measuring one or more selected biochemical markers in amniotic fluid;

a coupler adapted to arrange the device with respect to said amniotic sac to measure said amniotic fluid in situ without insertion of any instrument into said amniotic sac; and

a processing unit for processing measurement data from said device to obtain a value for said one or more selected biochemical markers in said amniotic fluid.